

# **SQL Project**



**by Muhammad Ejaz**

**Tables:**

**Orders  
Accounts  
Products**

```
1 -- missing and duplicates
2
3 • SELECT COUNT(*)
4 FROM orders
5 WHERE order_no IS NULL;
6
7 -- Checking for duplicates
8
9 • SELECT order_no, COUNT(order_no)
10 FROM orders
11 GROUP BY order_no
12 HAVING COUNT(order_no) > 1;
13
14 • SELECT *
15 FROM orders
16 WHERE
17     order_no = '5768-2'
18     OR order_no = '6159-2';
```

Result Grid									
order_no	order_date	customer_name	address	city	state	customer_type	account_id	order_priority	
5768-2	2015-01-22	Bill Donatelli	359 Crown Street,Surry Hills	Sydney	NSW	Corporate	4	Critical	
5768-2	2015-01-22	Bill Donatelli	359 Crown Street,Surry Hills	Sydney	NSW	Corporate	4	Critical	
5768-2	2015-01-22	Marcus Wilson	20 Chapel Road, Darlinghurst	Sydney	NSW	Consumer	6	Normal	

```
1 •  create database Order_DB;
2 •  use Order_DB;
3      -- Checking DataTypes
4
5 •  Describe orders;
6 •  Describe account;
7 •  describe products;
8
9 •  update orders
10    set order_date=str_to_date(order_date,'%m/%d/%Y'),
11        ship_date=str_to_date(ship_date,'%m/%d/%Y');
12
13 •  alter table orders
14    modify column order_date date,
15    modify column ship_date date;
16
```

Result Grid | Filter Rows:  | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
order_no	text	YES		NULL	
order_date	date	YES		NULL	
customer name	text	YES		NULL	
address	text	YES		NULL	

result 11 ×

Output

```
1 -- 1. What is the total revenue generated by each product category?  
2  
3 SELECT  
4     product_category, ROUND(SUM(total), 2) AS Revenue  
5 FROM  
6     products  
7     JOIN  
8     orders ON products.product_id = orders.product_id  
9 GROUP BY product_category;
```

It Grid | Filter Rows:  Export: Wrap Cell Content:

product_category	Revenue
Office Supplies	342518.02
Technology	831273.73
Furniture	31920.3

t2 x

```
1 -- 2.How many unique products have been ordered?  
2  
3 SELECT DISTINCT  
4     COUNT(product_name) AS Unique_Products  
5 FROM  
6     products
```

---

Result Grid			Filter Rows:	<input type="text"/>	Export:		Wrap Cell Content:	
			Unique_Products					
>			147					

```
1 -- 3. What is the total revenue generated each year?  
2  
3 SELECT  
4     EXTRACT(YEAR FROM order_date) AS Year,  
5     FORMAT(SUM(total), 2) AS Revenue  
6 FROM  
7     orders  
8 GROUP BY year;
```

Result Grid | Filter Rows:  Export: Wrap Cell Content:

Year	Revenue
2013	185,547.20
2014	339,841.08
2015	383,167.13
2016	273,561.12
2017	23,595.52

```
1 -- 4. What is the date of the latest and earliest order?  
2  
3 SELECT  
4     MIN(order_date) AS Earliest_Date,  
5     MAX(order_date) AS Latest_Date  
6 FROM  
7     orders;
```

---

Result Grid | Filter Rows:  Export: Wrap Cell Content:

	Earliest_Date	Latest_Date
▶	2013-02-11	2017-02-07

```
1 -- 6. What product category has the lowest average price of products?  
2  
3 SELECT  
4     product_category,  
5     ROUND(AVG(retail_price), 2) AS Average_Price  
6 FROM  
7     orders  
8     JOIN  
9     products USING (product_id)  
10 GROUP BY product_category  
11 ORDER BY Average_Price  
12 LIMIT 1;
```

Result Grid | Filter Rows: \_\_\_\_\_ | Export: | Wrap Cell Content: | Fetch rows: |

	product_category	Average_Price
▶	Office Supplies	17.9

```
1 -- 7. What are the top 10 highest performing products?  
2  
3 SELECT  
4     product_name, ROUND(SUM(total), 2) AS Revenue  
5 FROM  
6     products  
7     JOIN  
8     orders USING (product_id)  
9 GROUP BY product_name  
10 ORDER BY Revenue DESC  
11 LIMIT 10;  
12
```

Result Grid | Filter Rows:  Export: Wrap Cell Content:  Fetch rows:

	product_name	Revenue
▶	Cando PC940 Copier	214029.4
	HFX LaserJet 3310 Copier	200640.85
	Adesso Programmable 142-Key...	75413.62
	Elmwood 1520 Color...	70400.07

```
1 -- 8. Show the total revenue and profit generated by each account_manager?  
2  
3 SELECT  
4     account_manager,  
5     ROUND(SUM(total), 2) AS Revenue,  
6     ROUND(SUM(total) - SUM(cost_price), 2) AS Profit  
7 FROM  
8     account  
9     JOIN  
10    orders USING (account_id)  
11 GROUP BY account_manager  
12 ORDER BY Revenue DESC;
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	account_manager	Revenue	Profit
▶	Yvette Biti	155654.53	152839.52
	Natasha Song	128374.03	125509.84
	Tina Carlton	126611.55	124297.53
	Grand Total	410227.70	410746.9

```
1
2      -- What is the name,city & account manager of the Shighest selling product in 2017?
3  ●  SELECT
4      product_name,
5      city,
6      account_manager,
7      ROUND(SUM(total), 2) AS Revenue
8  FROM
9      orders
10     JOIN
11      products USING (product_id)
12     JOIN
13      account USING (account_id)
14 WHERE
15      EXTRACT(YEAR FROM order_date) = 2017
16 GROUP BY product_name , city , account_manager
17 ORDER BY Revenue DESC
18 LIMIT 5;
19
```

Result Grid | Filter Rows: \_\_\_\_\_ | Export: Wrap Cell Content: Fetch rows:

product_name	city	account_manager	Revenue
UGen Ultra Professional Cordle...	Melbourne	Connor Betts	8735.28
Adesso Programmable 142-Key...	Sydney	Leighton Forrest	7018.04
Smiths Colored Interoffice Enve...	Melbourne	Yvette Biti	1289.65
TechSavi Cordless Elite Duo	Sydney	Mihael Khan	1218.94
Artisan Legal 4-Ring Binder	Sydney	Natasha Song	861.62

Result 3

```
1 -- 10. Find the mean amount spent per order by each Customer type?  
2  
3 SELECT  
4     customer_type, ROUND(SUM(total), 2) AS Spent_Amount  
5 FROM  
6     orders  
7 GROUP BY customer_type  
8 ORDER BY Spent_Amount;
```

Result Grid | Filter Rows: \_\_\_\_\_ | Export: | Wrap Cell Content:

customer_type	Spent_Amount
Consumer	202225.01
Home Office	289123.31
Small Business	301021.44
Corporate	413342.29

```
1 -- 11. What is the 5th highest selling product?  
2  
3 SELECT  
4     product_name, ROUND(SUM(total), 2) AS Revenue  
5 FROM  
6     orders  
7     JOIN  
8     products USING (product_id)  
9 GROUP BY product_name  
10 ORDER BY Revenue DESC  
11 LIMIT 1 OFFSET 4;
```

Result Grid | Filter Rows:  Export: Wrap Cell Content:  Fetch rows:

product_name	Revenue
UGen Ultra Professional Cordle...	68699.41



**Thanks**

**Date:10-12-2025**